UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,639	05/12/2005	Alan George Rock	P2481US	1659

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2859	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/534,639	ROCK ET AL.
	Examiner	Art Unit	
	Tania C. Courson	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 February 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>*1-9,11,13,15,18-21,26,28 and 30-43*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-9,11,13,15,18-21,26,28 and 30-43*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>*12MAY05 & 22FEB07*</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-9, 11, 13, 15, 18-21, 26-28 and 31-42 are rejected under 35 U.S.C. 102(b) as

being anticipated by Davis (GB 2045938 A).

Davis disclose in the Figure, a measuring device comprising:

With respect to claims 1-4 and 31-42:

    a) a housing (1), power supply means (page 1, lines 118-122), one or more

    motion sensors (7-12) adapted to detect motion in six degrees of freedom (7-

    12), a processor (14) adapted to provide a measure of the relative spatial

    separation (page 2, lines 63-80), a user actuated trigger (5) for identifying a

    first location and a display (15) for visually presenting information on a

    measured relative spatial separation (the Figure) said processor is adapted

    further to determine at least one angle of a second location with a reference to

    a line or plane incorporating said first location (page 2, lines 31-44) for

    presentation by said display (page 2, lines 63-80) and to determine an error

    correction in relation to motion detected by said one or more motion sensors

    (page 2, lines 116-120);

b) wherein said processor is adapted to determine said at least one angle with respect to one or both of vertical and horizontal planes (page 2, lines 31-43);

c) wherein said processor is adapted to determine whether said first and second locations are level with respect to either of said vertical or horizontal planes (page 2, lines 31-43);

d) wherein said processor is adapted to determine, in addition to said at least one angle, a linear distance separating said first and second locations (page 2, lines 31-43);

e) further comprising a measuring point (3) provided on said housing and having a defined spatial relationship with respect to said one or more motion sensors (the Figure), said measuring point being visually distinguishable on said housing and user alignable with a user selected spatial location (page 2, lines 31-43);

f) wherein said measuring point is adapted to be substantially stationary when aligned by a user with a selected spatial location (page 2, lines 95-120);

g) wherein the processor is adapted to determine an error correction when said measuring point is aligned with a selected spatial location and is substantially stationary, in relation to motion detected by said one or more motion sensors (page 2, lines 95-120);

h) wherein the processor is in communication with a memory in which is stored calibration data and the processor is adapted to update calibration data stored in said memory at a second or subsequent location (page 2, lines 95-120);

i)   wherein said processor is adapted to adjust for movement of the one or more motion sensors as a result of uncontrolled hand movements of the user when updating calibration data stored in said memory (page 2, lines 95-120);

j)   comprising a plurality of motion sensors comprising at least three accelerometers and three angular rate sensors (page 2, lines 74-80);

k)   further including a timer, in communication with the processor, for monitoring the time duration of a measurement wherein the processor is adapted to determine the measure of relative spatial separation to a resolution dependent upon the time duration of the measurement (page 1, lines 35-50);

l)   the processor is adapted to determine from information received from the motion sensors when the measuring device is stationary and to generate an error correction (page 2, lines 95-120);

m)   wherein the processor has access to threshold data identifying lower limits of measurable spatial movement representative of small, uncontrolled hand movements of a user (page 2, lines 95-120);

n)   further comprising a deceleration device for reducing high deceleration forces (page 2, lines 116-120);

o)   wherein the processor is adapted to supply real time data on the measured relative spatial separation (page 1, lines 35-50);

p)   wherein the processor additionally includes a data store in which motion data is stored and said processor is adapted to update said stored motion data in dependence on calculated error corrections or updated calibration data and to

recalculate said measured spatial separation in dependence on the updated

motion data (page 2, lines 95-120).

With respect to claim 5:

a) a housing (1), power supply means (page 1, lines 118-122), a processor (14)

and one or more motion sensors (7-12) adapted to provide a measure of the

relative spatial separation of at least first and second locations (page 2, lines

63-80), a user actuated trigger (5) for identifying at least said first location and

a display (15) for visually presenting information on a measured relative

spatial separation (the Figure) wherein said processor is further adapted to

determine at least one angle of said second location with reference to a line or

plane incorporating said first location and a linear distance (page 2, lines 31-

44) for presentation by said display (page 2, lines 31-43) and to determine an

error correction in relation to motion detected by said one or more motion

sensors (page 2, lines 116-120);

With respect to claims 6-9, 11, 13, 15, 18-21 and 26-28:

a) a housing (1), power supply means (page 1, lines 118-122), a processor (14)

and one or more motion sensors (7-12) adapted to provide a measure of the

relative spatial separation of at least first and second locations (page 2, lines

63-80), a user actuated trigger (5) for identifying at least said first location and

a display (15) for visually presenting information on a measured relative

spatial separation (the Figure) said measuring device further including a measuring point (3) provided on said housing having a defined spatial relationship with respect to said one or more motion sensors (the Figure), said measuring point being provided for identification to said processor (the Figure), in association with said user actuated trigger, at least one of said first and second locations (page 2, lines 31-43) and said processor being adapted to determine an error correction in relation to motion detected by said one or more motion sensors (page 2, lines 116-120);

b) wherein said measuring point is visually distinguishable on said housing and user alignable with a user selected spatial location (page 2, lines 31-43);

c) wherein said measuring point is adapted to be substantially stationary when aligned by a user with a selected spatial location (the Figure);

d) wherein processor is adapted to determine an error correction when said measuring point is aligned with a selected spatial location and is substantially stationary, in relation to motion detected by said one or more motion sensors (page 2, lines 95-120);

e) wherein the processor is in communication with a volatile memory in which is stored calibration data and the processor is adapted to update calibration data stored in said volatile memory at a second or subsequent location (page 2, lines 95-120);

f) wherein said processor is adapted for movement of the one or more motion

sensors as a result of uncontrolled hand movements of the user when updating

calibration data stored in said volatile memory (page 2, lines 95-120);

g) wherein said one or more motion sensors comprise at least three

accelerometers and three angular rate sensors (page 2, lines 74-80);

h) further including a timer, in communication with the processor for monitoring

the time duration of a measurement wherein the processor is adapted to

determine the measure of relative spatial separation to a resolution dependent

upon the time duration of the measurement (page 1, lines 35-50);

i) wherein the processor is adapted to determine from information received from

the motion sensors when the measuring device is stationary and to generate an

error correction (page 2, lines 95-120);

j) wherein the processor has access to threshold data identifying lower limits of

measurable spatial movement representative of small, uncontrolled hand

movements of a user (page 2, lines 95-120);

k) further comprising a deceleration device for reducing high deceleration forces

(page 2, lines 116-120);

l) wherein the processor is adapted to supply real time data on the measured

relative spatial separation (page 1, lines 35-50);

m) wherein the processor additionally includes a data store in which motion data

is stored and said processor is adapted to update said stored motion data in

dependence on calculated error corrections or updated calibration data and to

recalculate said measured spatial separation in dependence on the updated

motion data (page 2, lines 95-120).

With respect to the preamble of the claims 1 and 5-6: the preamble of the claim has not

been given any patentable weight because it has been held that a preamble is denied the effect of

a limitation where the claim is drawn to a structure and the portion of the claim following the

preamble is a self – contained description of the structure not depending for completeness upon

the introductory clause. ***Kropa v. Robie***, 88 USPQ 478 (CCPA 1951).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claim 30 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis in

view of Richter (US 6,715,213 B2).

Davis discloses a measuring device, as stated above in paragraph 2.

Davis does not disclose including a non-contact distance meter for measuring a distance

to a position remote from the measuring device, the position being at least one of said first and

second locations.

Richter teaches an analysis sample device that consists of including a non-contact

distance meter (34) for measuring a distance to a position remote from the measuring device, the

position being at least one of said first and second locations (column 4, lines 20-37). Therefore,

it would have been obvious to one having ordinary skill in the art at the time the invention was

made to further modify the measuring device of Davis, so as to include a non-contact distance

meter, as taught by Richter, in order to increase precision when measuring a distant position.

Response to Arguments

5.   Applicant's arguments filed on February 22, 2007 have been considered but are moot in

view of the new ground(s) of rejection.

6.   With respect to the applicant's argument concerning the lack of "error correction"

teaching in Davis, motion damping is an "error correction" component, thus Davis does teach

this portion of the claim language.

7.   With regards to the argument that Richter fails to teach "error correction", the applicant is

improperly interpreting the Richter reference, as interpreted by the Examiner as provided in the

prior office action. The Davis reference is the one that teaches the "error correction" portion of

the claim language.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tania C. Courson whose telephone number is (571) 272-2239.

The examiner can normally be reached on Monday, Wednesday and Thursday from 9AM to

5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Diego Gutierrez, can be reached on (571) 272-2245.

The fax number for this Organization where this application or proceeding is assigned is

(571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Diego Gutierrez
Supervisory Patent Examiner
Technology Cer

TCC
April 30, 2007